Service Manual

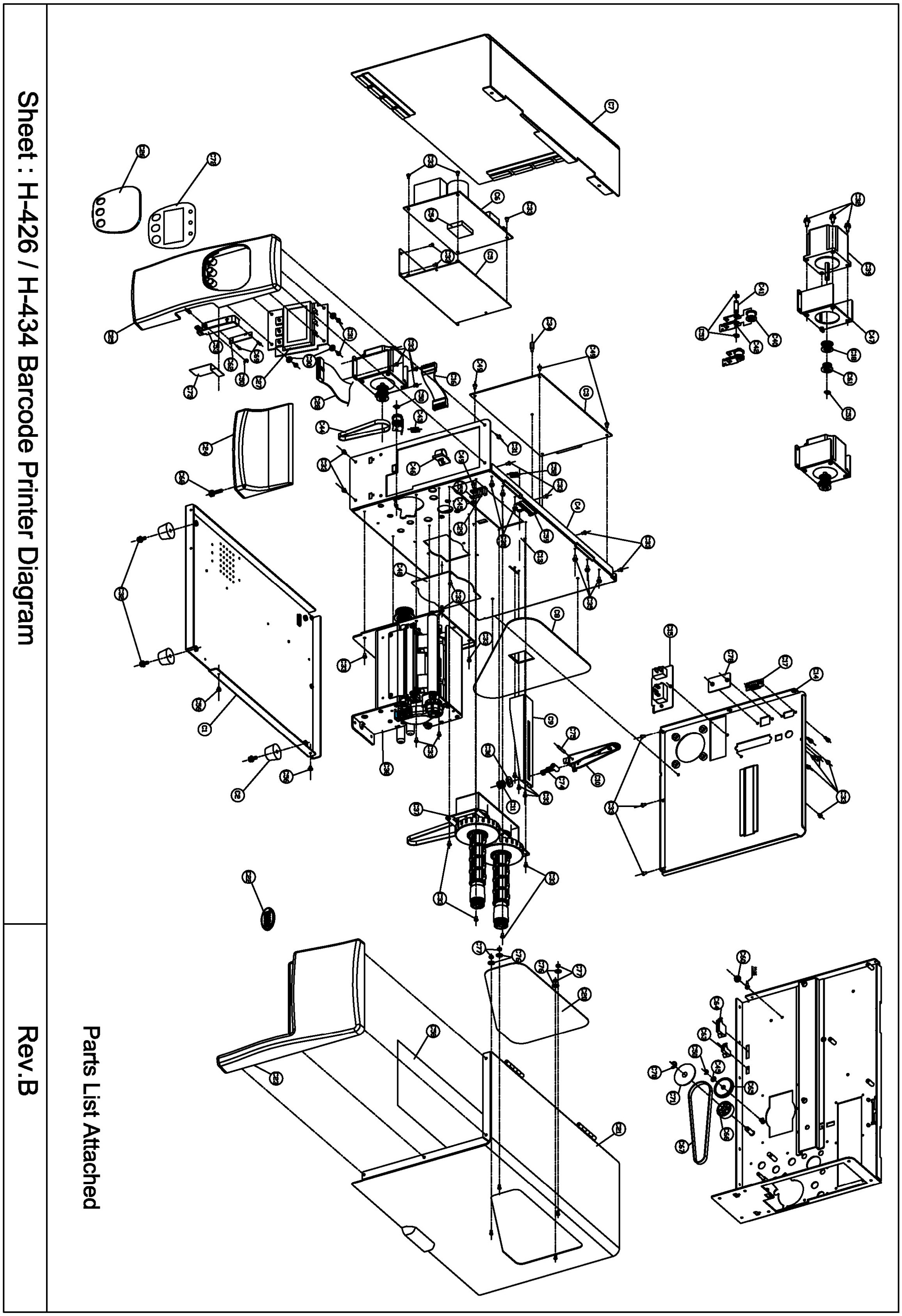
H-426 / H-434

Thermal Transfer Printer

SPECIFICATIONS

Model	THARO H–426	THARO H-434
Resolution	8 dots/mm (203dpi)	12 dots/mm (300dpi)
Print Mode	Thermal Transfer/Direct Thermal	Thermal Transfer/Direct Thermal
Printer CPU	16 Bit Processor	
Sensor Location	Moveable, left aligned	
Sensor Type	Reflective, Transmissive	
Sensor Detection	Type: Label gap and black mark sensing Detection: Label length auto sensing and/or program command setting	
Print Speed	50.8mm (2")/sec ~ 152.4mm (6")/sec	50.8mm (2")/sec ~ 101.6mm (4")/sec
Print Length	12mm (0.47") ~ 1270mm (50")	12mm (0.47") ~ 558.8mm (22")
Print Width	25mm (1") ~ 104mm (4.09")	25mm (1") ~ 105mm (4.13")
Media	Label Roll: Max. 203mm (8") O.D. Core Diameter: 38.1mm (1.6") ~ 76.2mm (3") Width: 25.0mm (1") ~ 118.0mm (4.65") Thickness: 0.06mm (0.002") ~ 0.25mm (0.009")	
Ribbon	Material: Thermal Transfer ribbons (wax, resin and wax/resin) Type: Ink inside or ink outside Length: 450m (1471') Width: 30mm (1.18") ~ 110mm (4.33") Inner Core Diameter: 25.4mm (1") Ribbon Roll Diameter: 75mm (2.95")	
Printer Language	TPL (Tharo Programming Language)	
Software	Application: **EASYLABEL**® Start Driver: Microsoft Windows 95, 98, ME, NT 4, 2000 and XP	
Resident Fonts	9 resident alphanumeric fonts (including OCR A & B) that are available in 4 orientations (0°, 90°, 180°, 270°), 8-point sizes (6, 8, 10, 12, 14, 18, 24, 30), and are expandable 8 times horizontally and vertically.	
Downloadable Fonts	Windows Bit-map fonts and Asian fonts are downloadable. Windows fonts in 4 orientations (0°, 90°, 180°, 270°). Asian fonts in 8 orientations.	
Image Handling	BMP and PCX	
Bar Codes	Code 39, Code 93, Code 128 (subset A, B, C), UCC 128, UPC A, UPC E, UPC 2 & 5 digit add on, I 2 of 5, EAN 8, EAN 13, EAN 2 & 5 digit add on, Codabar, Postnet, EAN 128, DUN 14, MaxiCode, PDF417, and DataMatrix	
Interfaces	Serial, Parallel, USB, PS/2 keyboard	
Serial Interface Transmission Speed	Baud rate 300 ~ 38400, XON/XOFF, DSR/DTR	
Memory	Built-In: 2MB Flash, 2MB DRAM Optional: An additional 2MB of Flash	
LCD Display	Backlit Graphic LCD Display Three bi-color LED lamps: Power, Ready, Error Three Control keys: Feed, Pause, Cancel	
Power	110/240VAC, 50/60 Hz	
Real-Time Clock	Time and Date stamp	
Environment	Operation: 5°C to 40°C (40°F to 104°F) Storage: -20°C to 50°C (-40°F to 122°F)	
Humidity	Operation: 30-85%, non-condensing. Free air. Storage: 10-90%, non-condensing. Free air.	
Agency Listings	CE, CUL, FCC Class A	
Printer Dimensions	Length: 454.58mm (17.9") Height: 277.30mm (10.92") Width: 275.55mm (10.85") Weight: 13Kg (28.7lbs)	
Options	Cutter with Tray Internal Rewind 2MB Flash memory module Stand-alone keyboard	

EXPLODED DIAGRAM OF PRINTER



H-426 Parts List

MODEL: H-426 08-24-2004 REV: A

Item	Tharo No.	Part Name
		H-426
1	710-029300-00	Base Plate
2	703-029900-00	Rubber Foot
3	141-020047-90	MAIN PCB Assembly H-426
4	710-029400-02	Printhead Pressure Shaft
5	710-028200-00	Power Bracket
6	141-020036-90	Switching Power Supply Assembly (UPS110-1241-1)
7	710-030200-01	Left Cover
8	710-028800-00	Paper Roll Plate
9	710-028700-01	Label Roll Bar
10	700-039401-00	Label Adjust Lever
11	712-029700-00	Label Adjust Lever Spring
13	700-032201-00	Ribbon Position Lever
14	710-029500-01	Back Cover
15	141-020040-90	Power Switch Assembly
16	601-060009-05	Power Cable-MAIN PCB
17	601-000021-00	RS232
18	701-001500-01	22T Gear (Double Hub)
20	705-001700-00	Acrylic Plate
21	710-039700-00	Right Cover
22	705-002300-00	LOGO
23	700-031800-01	Top Right Panel
24	700-031900-02	Bottom Right Panel
25	700-031700-02	Left Panel
26	700-041000-00	LCD Cover
27	141-020037-95	LCD PCB Assembly
28	601-260006-00	LCD Cable - Main PCB
29	160-000106-00	RIBBON OUT PCB
30	700-035500-00	Cushion ∅4*9*1.5
31	820-530080-25	Screw M3*8
32	801-440100-14	Screw M4*10(SW+W)
33	801-230452-11	Flat Head Screw M3*4.5
34	840-000002-00	Boss 3*10
35	801-630060-17	Hex Screw M3*6

36	851-821615-00	Metal Washer Ø8.2*1.5t
37	141-020024-95	Ribbon Assembly
38	131-00H426-00	Mechanism Assembly
39	462-030012-00	Stepping Motor
40	701-001900-00	Idle Poly
41	711-029200-00	Poly Core
42	710-028300-00	Poly Bracket
43	712-027300-00	Idle Ploy Spring
44	703-027700-00	Belt 100MXL
45	858-400805-00	Washer ⌀4*⌀8*0.5t
46	703-028800-00	Wire Clip(WL-1)
47	710-028500-00	Motor Bracket
48	710-034100-00	Liner Rewind Cover
49	801-430060-15	Screw M3*6+SW
50	855-300706-00	E Ring ⌀3
51	855-400906-00	E Ring ⌀4
52	712-027200-00	Ribbon Rewind Spring
53	700-036000-01	Stripper Box
54	700-036700-00	Cushion 20*20*5t
55	700-036600-00	Mylar 13*9.5*0.25t
56	703-027500-00	Plastic Screw SR2.6-3.2
58	730-012300-00	Ribbon & Label Instruction Label
59	731-011700-01	Ribbon Position Label
60	801-940060-19	Screw M4*6+Tooth Washer
61	701-002900-00	22T Gear (Single Hub)
62	160-000114-00	Stripper Sensor PCB
63	601-020023-00	2 Pin Cable-Rewinder
64	601-050019-00	5 Pin Cable-Cutter
65	701-001200-00	64T (ID□4) Gear
66	701-002500-00	40/36 Tooth Gear
67	703-027800-02	Belt 140MXL
68	703-029000-00	Hand Screw M4*6*⌀10
69	820-417050-15	Screw M1.7*5
70	855-501106-00	E Ring ⌀5
71	858-602905-00	Washer ⌀6*Ø29*0.5t
72	705-002000-00	LCD Cover Plate
73	700-040900-00	Mylar Piece
74	700-039501-00	Label Adjust Lever Core

75	713-020500-00	Spring Twig Ø2.5*18L
76	856-301003-00	E-Ring Ø3*Ø10*0.3t(SPN-3)
77	841-030551-20	Nut/BK/M3*0.5
78	710-048100-00	Ethernet Socket Cover

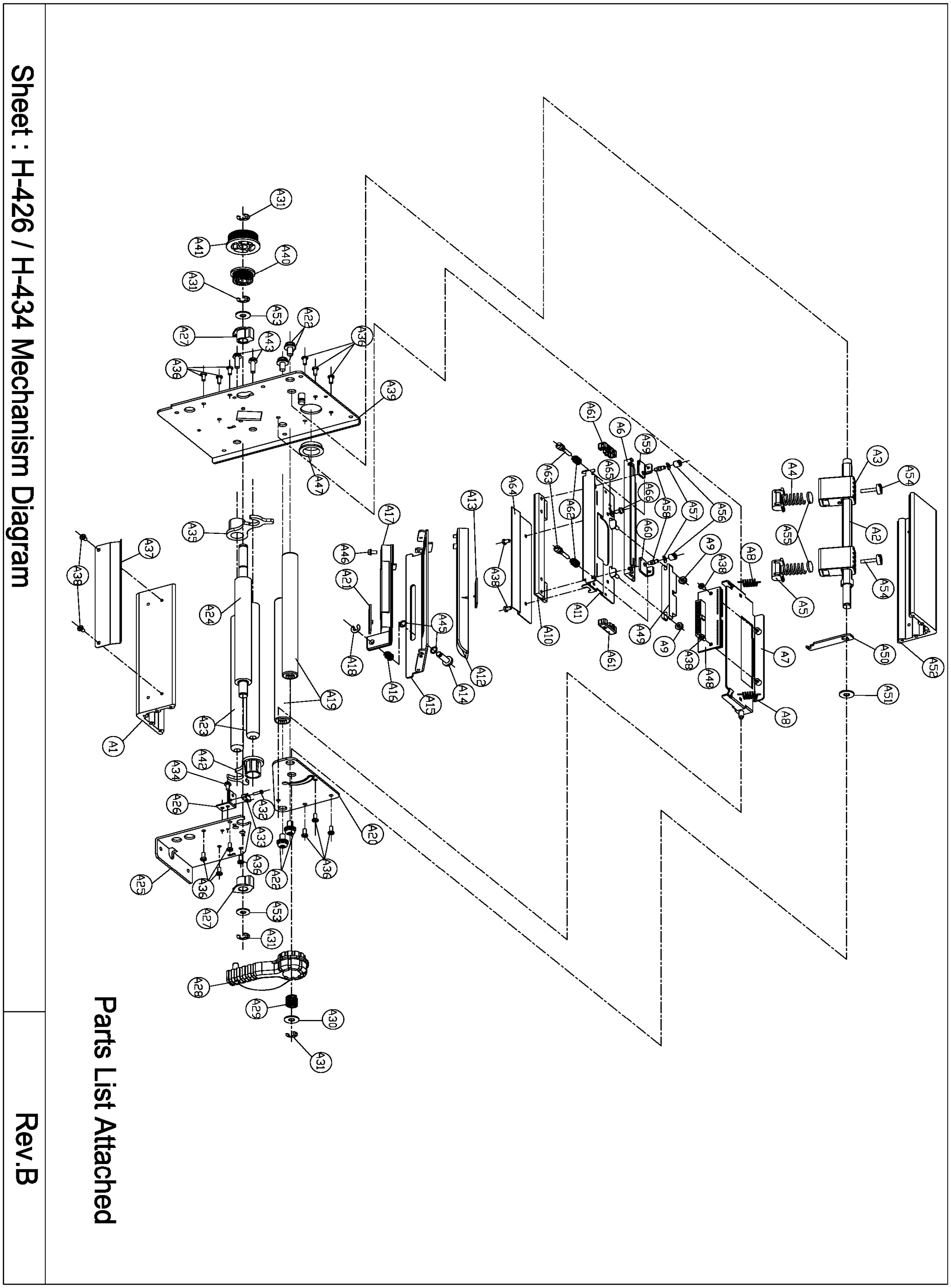
H-434 Parts List

Item	Tharo No.	Part Name
		H-434
1	710-029300-00	Base Plate
2	703-029900-00	Rubber Foot
3	141-020048-90	MAIN PCB Assembly
4	710-029400-02	Middle Wall Plate
5	710-028200-00	Power Bracket
6	141-020036-90	Switching Power Supply Assembly
7	710-030200-01	Left Cover
8	710-028800-00	Paper Roll Plate
9	710-028700-01	Label Roll Bar
10	700-039401-00	Label Adjust Lever
11	712-029700-00	Label Adjust Lever Spring
13	700-032201-00	Ribbon Position Lever
14	710-029500-01	Back Cover
15	141-020036-90	Power Switch Assembly
16	601-060009-05	Power Cable-Main PCB
17	601-000021-00	RS232
18	701-001500-01	22T Gear (Double Hub)
20	705-001700-00	Acrylic Plate
21	710-039700-00	Right Cover
22	705-002300-00	LOGO
23	700-031800-01	Top Right Panel
24	700-031900-02	Bottom Right Panel
25	700-031700-02	Left Panel
26	700-041000-00	LCD Cover
27	141-020037-95	LCD PCB Assembly
28	601-260006-00	LCD Cable-Main PCB
29	160-000106-00	RIBBON OUT PCB
30	700-035500-00	Cushion ⌀4*9*1.5
31	820-530080-25	Screw M3*8
32	801-440100-14	M4*10
33	801-230452-11	Flat Head Screw M3*4.5
34	840-000002-00	Boss 3*10
35	801-630060-17	Hex Screw M3*6

36	851-821615-00	Metal Washer ⌀8.2*16*1.5t
37	141-000024-20	Ribbon Assembly
38	131-00H434-00	Mechanism Assembly
39	462-030012-00	Stepping Motor
40	701-001900-00	Idle Poly
41	711-029200-00	Poly Core
42	710-028300-00	Poly Bracket
43	712-027300-00	Idle Poly Spring
44	703-027700-01	Belt 100MXL
45	858-400-805-00	Washer ⌀4*⌀8*0.5t
46	703-028800-00	Wire Clip (WL-1)
47	710-028500-00	Motor Bracket
48	710-034100-00	Rewinder Wall Plate
49	801-430060-15	Screw M3*6+SW
50	855-300706-00	E Ring ⌀3
51	855-400906-00	E Ring Ø4
52	712-027200-00	Ribbon Rewind Spring
53	700-036000-01	Stripper Box
54	700-036700-00	Cushion 20*20*5t
55	700-036600-00	Mylar Piece 13*9.5*0.25t
56	703-027500-00	Plastic Screw SR2.6-3.2
58	730-012300-02	Ribbon & Label Instruction Label
59	731-011700-00	Ribbon Position Label
60	801-940060-19	Screw M4*6+Tooth Washer
61	701-002900-00	22T(Single Hub)
62	160-000114-00	Stripper Sensor PCB
63	601-020023-00	2 Pin Cable Rewinder
64	601-050019-00	5Pin Cable-Cutter
65	701-001200-00	64T (ID□4) Gear
66	701-002500-00	40/36 Tooth Gear
67	703-027800-02	Belt 140MXL
68	703-029000-00	Hand Screw M4*6*⌀10
69	820-417051-15	Screw M1.7*5
70	855-501106-00	E Ring ⌀5
71	858-602905-00	Washer ⌀6*⌀29*0.5t
72	705-002000-00	LCD Cover Plate
73	700-040900-00	Mylar Piece
74	700-039501-00	Label Adjust Lever Core

75	713-020500-00	Spring Twig Ø2.5*18L
76	856-301003-00	E-Ring Ø3*Ø10*0.3t(SPN-3)
77	841-030551-20	Nut/BK/M3*0.5
78	710-048100-00	Ethernet Socket Cover

PRINT MECHANISM ASSEMBLY



H-426 Parts List

Item	Tharo No.	Part Name
		Mechanism H-426
	131-00H426-00	**H-426 Mechanism Assembly**
1	710-033500-00	Bottom Mech.Bracket
2	711-029400-01	Print Head Pressure Shaft
3	700-030800-01	Print Head Spring Box
4	712-029600-01	Print Head Spring
5	700-030700-00	Print Head Pressure Head
6	700-040700-01	TPH Frame Plate
7	710-036200-00	TPH Main Holder
8	712-027000-00	Print Head Lift Spring
9	844-030551-10	M3 Nut
10	141-020044-95	H-426 TPH Assembly
11	710-036300-02	TPH Sub Holder
12	700-031100-00	Moveable Sensor Box (top cover)
13	160-000105-00	SEE THRU PCB
14	711-029600-00	Sensor Box Lever
15	710-029600-01	Moveable Sensor Bracket
16	712-027100-00	Moveable Sensor Spring
17	700-031200-00	Moveable Sensor Box (lower cover)
18	855-400906-00	E Ring ø4
19	711-029500-01	Ribbon Shaft ø5
20	710-039400-00	
21	160-000104-00	BLACK MARK PCB
22	801-460120-14	Screw M6*12(SW+W)
23	711-030600-00	Label Feed Bar
24	702-000800-01	Platen Roller
25	710-029100-01	Bottom Right Bracket
26	710-028000-00	Print Head Switch Bracket
27	710-033200-01	Platen Bearing
28	700-030900-00	Print Head Lever
29	712-027500-01	Print Head Lever Spring
30	851-821615-00	Metal Washer ø8.2*□16*1.5t (metal)
31	855-601208-00	E Ring ø6
32	801-420080-11	Screw M2*8
33	162-000008-00	Door Open Switch

34	801-430040-15	Screw M3*4
35	700-030500-00	Label Adj. Guide (Left)
36	801-230602-11	Flat Head Screw M3*6
37	710-029800-01	Tear Off Bar
38	801-230452-11	Flat Head Screw M3*4.5
39	710-039500-00	Left Side Wall
40	701-001700-00	30 Tooth Gear
41	701-001600-00	44 Tooth Gear
42	700-035900-00	Label Adj. Guide (Right)
43	801-450100-14	Screw M5*10(SW+W)
45	858-520805-00	Washer Ø5.2*Ø8*0.5t
46	820-430080-15	Screw M3*8
47	703-028700-00	Rubber Cable Clip
48	160-000134-01	TPH Switch Assembly
49	601-300001-00	TPH Cable
50	710-034200-00	TPH Lever Hook
51	860-811605-00	Washer ⌀8.1*Ø16*0.5
52	710-034600-00	Middle Wall (Top)
53	860-821205-00	Washer Ø 8.2*Ø12*0.5
54	711-038600-00	TPH Pressure Screws
55	710-039600-00	Washer Ø 11.7*1.6t
56	711-038900-00	TPH Nut
57	854-326500-01	Washer Ø 3.2*Ø 6.5*0.15t
58	711-038800-00	TPH Screw
59	710-037200-00	TPH Position Adj. Bracket LH
60	710-037300-00	TPH Position Adj. Bracket RH
61	700-040800-00	TPH Frame Guide
62	712-029800-00	TPH Position Adj. Spring
63	711-038500-00	TPH Position Adj. Screw
64	710-037400-00	TPH Cover
65	713-020800-00	Spring Leaf
66	801-430040-11	Screw/P/NI/M3*4

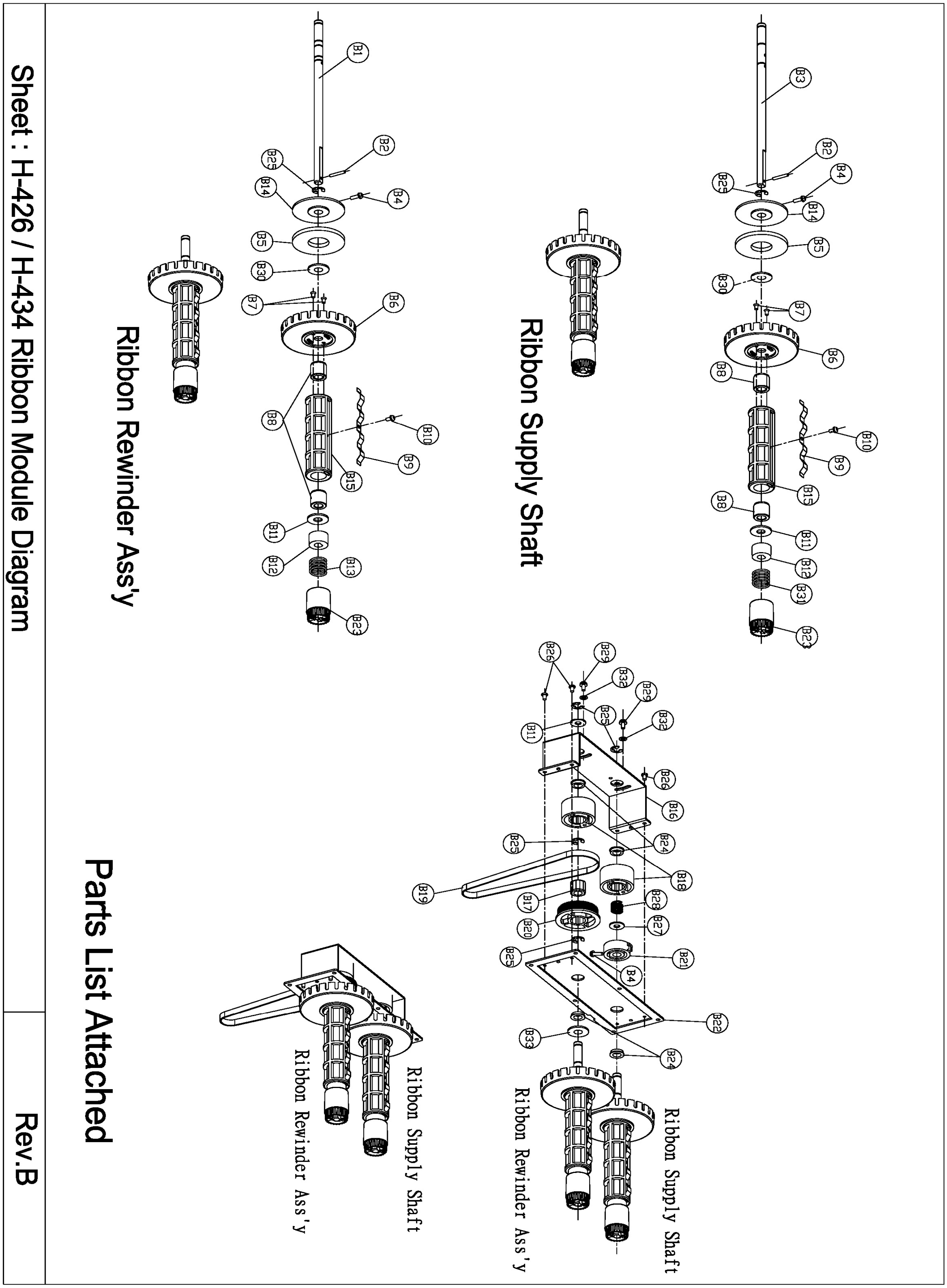
H-434 Parts List

MODEL: H-434 08-24-2004 REV: A

Item	Tharo No.	Part Name
		Mechanism H-434
	131-00H434-00	**H-434 Mechanism Assembly**
1	710-033500-00	Bottom Mech.Bracket
2	711-029400-01	Print Head Pressure Shaft
3	700-030800-01	Print Head Spring Box
4	712-029600-00	Print Head Spring
5	700-030701-00	Print Head Pressure Head
6	700-040700-01	TPH Frame Plate
7	710-036200-00	TPH Main Holder
8	712-027000-00	Print Head Lift Spring
9	844-030551-10	M3 Nut
10	141-020045-95	H-434 Printhead Assembly
11	710-036300-02	TPH Sub Holder
12	700-031100-00	Moveable Sensor Box (top cover)
13	160-000105-00	SEE THRU PCB
14	711-029600-00	Sensor Box Lever
15	710-029600-01	Moveable Sensor Bracket
16	712-027100-00	Moveable Sensor Spring
17	700-031200-00	Moveable Sensor Box (lower cover)
18	855-400906-00	E Ring ⌀4
19	711-029500-01	Ribbon Shaft Ø5
20	710-039400-00	Right Panel
21	160-000104-00	Black Mark PCB
22	801-460120-14	Screw M6*12 (SW+W)
23	711-030600-00	Label Feed Bar
24	702-000800-01	Platen Roller
25	710-029100-01	Bottom Right Bracket
26	710-028000-00	Print Head Switch Bracket
27	710-033200-01	Platen Bearing
28	700-030901-00	Print Head Lever
29	712-027500-01	Print Head Lever Spring
30	851-821615-00	Metal Washer Ø 8.2*Ø16*1.5t
31	855-601208-00	E Ring ⌀6
32	801-420080-11	Screw M2*8

33	162-000008-00	Door Open Switch
34	801-430040-15	Screw M3*4
35	700-030501-00	Label Adj. Guide (Left)
36	801-230602-11	Flat Head Screw M3*6
37	710-029800-01	Tear Off Bar
38	801-230452-11	Flat Head Screw M3*4.5
39	710-039500-00	Left Side Wall
40	701-001700-00	30 Tooth Belt Gear
41	701-002800-00	65 Tooth Belt Gear
42	700-035900-00	Label Adj. Guide (Right)
43	801-450100-14	Screw M5*10 (+SW+W)
45	858-520805-00	Washer Ø5.2*Ø8*0.5t
46	820-430080-15	Screw M3*8
47	703-028700-00	Rubber Cable Clip
48	160-000134-10	TPH Switch Assembly (300dpi)
49	601-300002-00	TPH Cable (300dpi)
50	710-034200-00	Print Head Lever Hook
51	860-811605-00	Washer Ø 8.1*Ø16*0.5
52	710-034600-00	Top Mech. Bracket
53	860-821205-00	Washer Ø 8.2*Ø12*0.5
54	711-038600-00	Pressure Adj. Screw
55	710-039600-00	Washer Ø 11.5*1.6t
56	711-038900-00	TPH Nut
57	854-326500-01	Washer Ø 3.2*Ø 6.5*0.15t
58	711-038800-00	TPH Screw
59	710-039800-00	TPH Position Adj. Bracket LH
60	710-039900-00	TPH Position Adj. Bracket RH
61	700-040800-00	TPH Frame Guide
62	712-029800-00	TPH Position Adj. Spring
63	711-038500-00	TPH Position Adj. Screw
64	710-037400-00	TPH Cover
65	713-020800-00	Spring Leaf
66	801-430040-11	Screw/P/NI/M3*4

RIBBON MODULE DIAGRAM



Ribbon Module Parts List

MODEL: H-426 Data:08-25-2004 REV: A

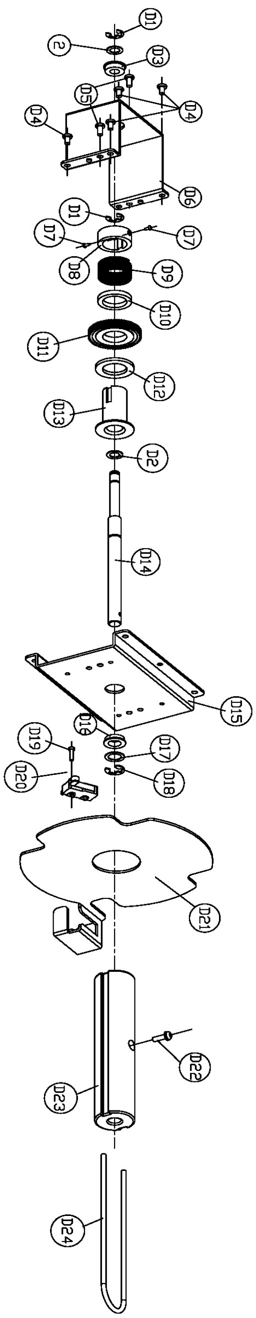
Item	Tharo No.	Part Name
	141-020024-95	**Ribbon Assembly**
1	711-028900-00	Ribbon Rewind Core
2	713-020100-00	Spring Twig Ø2.5*16L
3	711-028800-00	Ribbon Supply Core
4	801-430120-11	Screw M3*12
5	700-031400-00	Wool Fiber Ø50*Ø20*4.0t
6	700-030000-00	Ø70 Friction Plate
7	820-726060-25	Tapping Screw M2.6*6
8	710-033100-00	Bearing 15*8*15L
9	710-027900-00	Ribbon Core Blade
10	820-430040-13	TAPPING SCREW/P/NI/M3*4
11	860-811605-00	Washer Ø 8.1*16*0.5
12	700-029901-00	Ø18 Friction Plate
13	712-027400-00	Ribbon Supply Spring
14	700-030100-00	Ø50 Friction Plate
15	700-034601-00	Ribbon Shaft
16	710-028400-01	Ribbon Core Support Bracket
17	713-011300-01	One Way Clutch
18	700-035301-01	One Way Clutch Holder
19	703-027800-01	Belt 160MXL025
20	701-001800-00	60 Tooth Gear
21	700-030401-00	Ribbon Rewind Plate
22	710-030700-00	Ribbon Assembly Wall Plate
23	700-030201-00	4 Notch Knob
24	713-011400-00	Bearing Ø12*8
25	855-601208-00	E Ring Ø6
26	801-230452-11	Flat Head Screw M3*4.5
27	851-821615-00	Metal Washer Ø8.2*Ø16*1.5t
28	712-028300-00	Ribbon Rewind Secure
29	801-630060-17	Hexagonal Screw M3*6
30	858-822010-00	Nylon WashwerØ8.2*Ø20*1.0t
31	712-029500-01	Ribbon Supply Spring
32	852-300705-00	Geared WasherØ3*Ø7*0.5t
33	700-027500-00	Wool Fiber Ø24*Ø15.3*2.0t

REWINDER MODULE DIAGRAM

Sheet : (Option) Rewinder Module Diagram

Parts List Attached

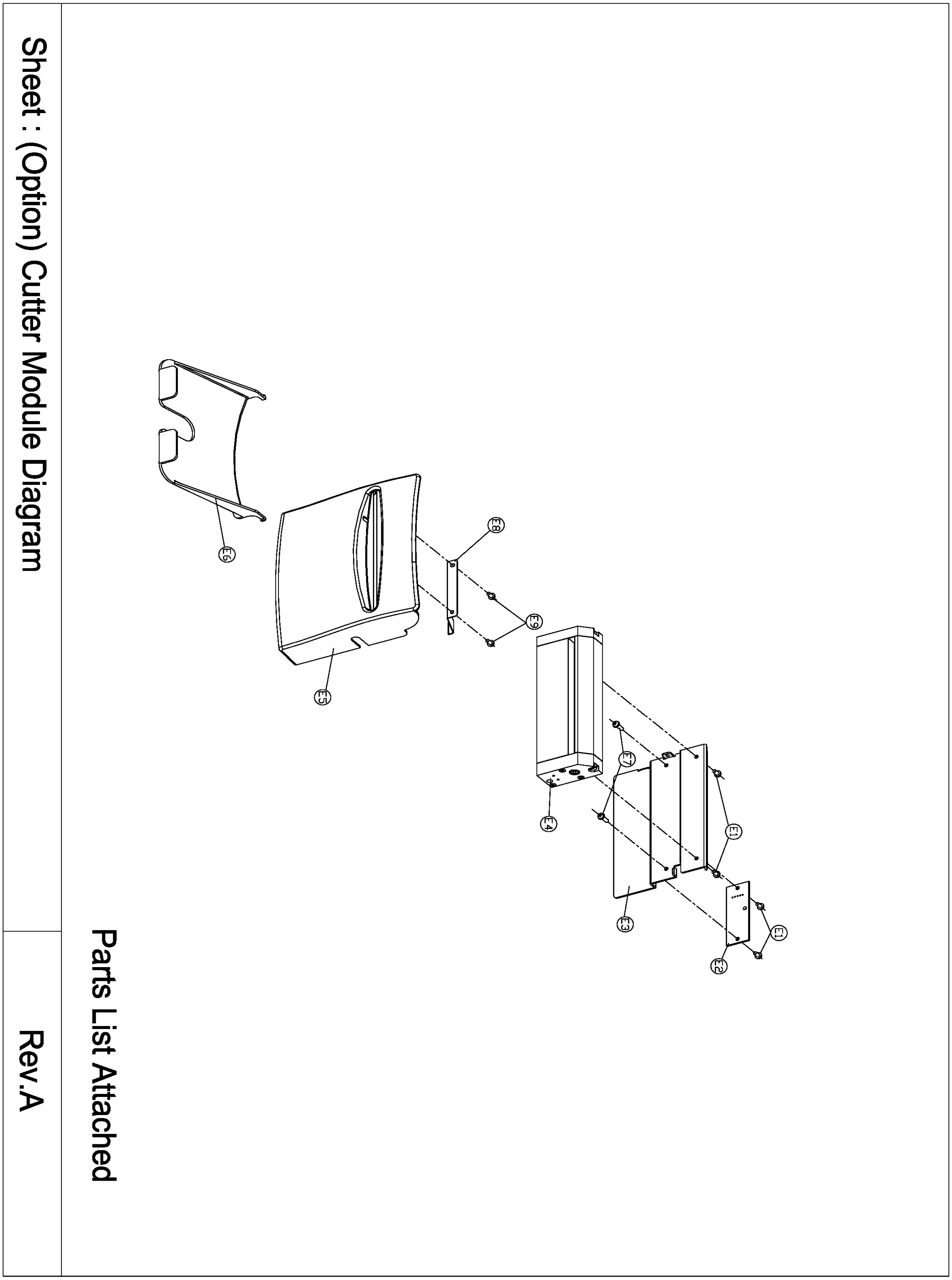
Rev.A



Rewinder Parts List

Item	Tharo No.	Part Name
	151-020007-90	**Internal Rewinder**
1	855-501106-00	E-RING Φ5*11*0.6t/mm
2	858-620805-00	NYLON WASHER Φ6.2*8.0*0.5t/mm
3	713-020300-00	LF-1260ZZ Φ6*Φ12
4	801-230452-11	MACHINE SCREW/I/NI/M3*4.5
5	801-230602-11	MACHINE SCREW/I/NI/M3*6
6	710-034500-00	SUPPORTER LINER REWINDER
7	820-417040-11	TAP/P/NI/1.7*4(TAPI)
8	700-013900-01	FIXED HOLDERΦ21-12-8t/mm
9	712-028500-00	SPRING Φ1.6*19.5*20L*5N
10	700-029000-00	FRICTION PLATEΦ24*15.2*3
11	701-000900-01	SPUR GEAR 64T/Φ16
12	700-036800-00	SILICONE Φ28*15.2*2.0t
13	700-029200-00	ONE WAY CLUTCH HOLDER
14	711-035300-00	SHAFT, LINER REWINDER
15	710-034300-00	BASE, LINER REWINDER
16	713-011400-00	LF-1280ZZ Φ8*Φ12
17	860-821205-00	GRAPHITE WASHER Φ8.2*12.0*0.5t/mm
18	855-601208-00	E-RING Φ6*12*0.8t/mm
19	801-420080-11	MACH/P/NI/M2*8
20	161-000011-00	REWINDER FULL SW ASS'Y
21	710-034400-01	STOPPER, LINER REWINDER
22	801-430120-11	MACHINE/P/NI/M3*12
23	700-036100-00	ROLLER, LINER REWINDER
24	712-028400-00	CLIP, LINER REWINDER

CUTTER MODULE DIAGRAM



Cutter Parts List

Item	Tharo No.	Part Name
	151-0200006-90	**Cutter Module With Tray**
1	801-430060-15	MACH/P/NI/M3*6(SPW ONLY)
2	160-000064-20	CUTTER PCB
3	711-035600-00	CUTTER BRACKET
4	650-000006-00	4"(R/C) 24V 0685031 P2.0
5	700-036200-00	CUTTER COVER
6	700-036300-00	TICKET TRAY
7	801-430082-14	MACH/T/NI/M3*8
8	711-040700-00	CUTTER SPLINT
9	820-430061-15	TAP /NI(FW)3*6

MAINTENANCE PROCEDURES

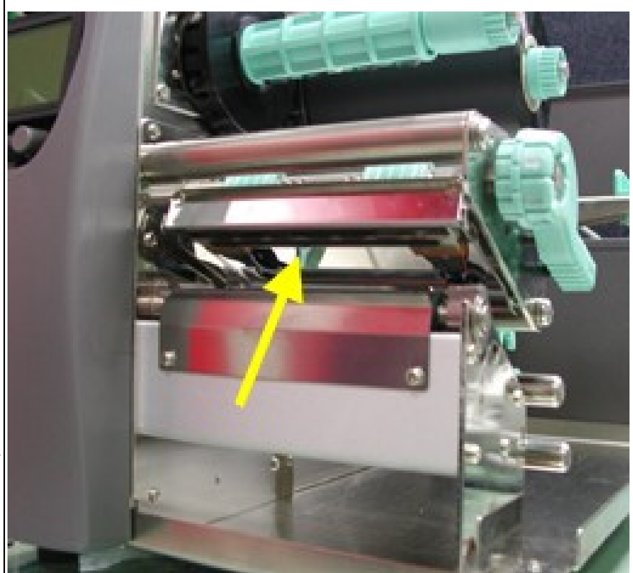
Cleaning the Thermal Printhead

CAUTION!
The Printhead is the Most Fragile part of your Printer. Do NOT use sharp or hard objects to clean the Printhead. Do NOT touch the glass surface of the Printhead with your hand.

CAUTION!
During the print process the Printhead will become hot. Do NOT attempt to clean the Printhead until it has had time to cool.

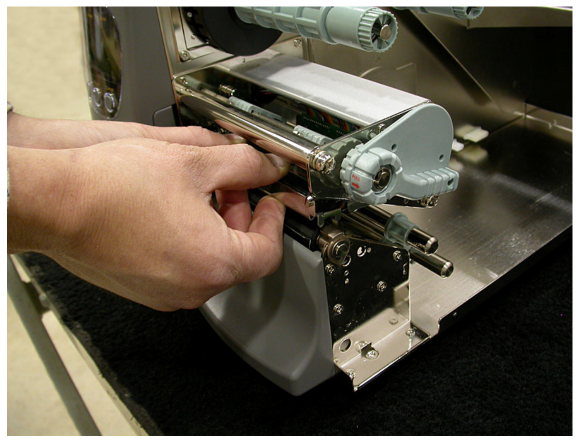
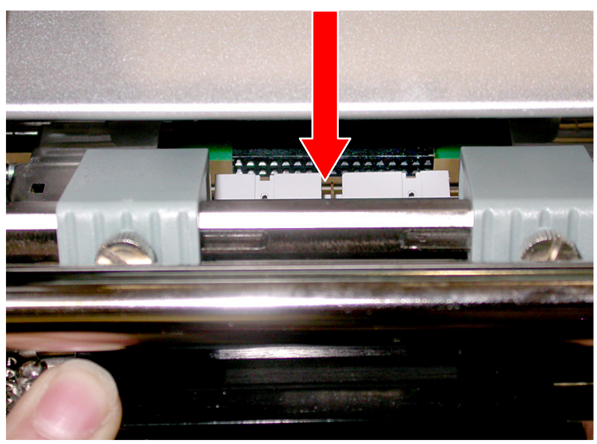
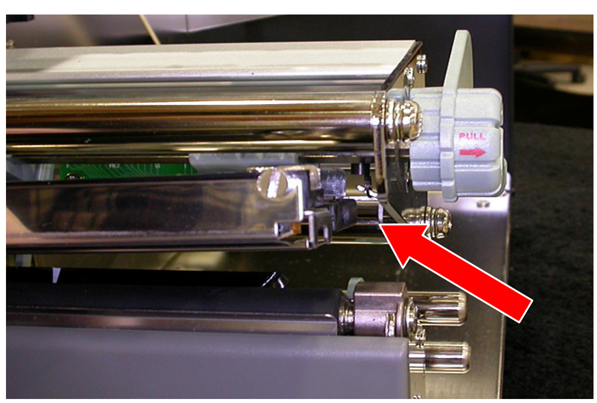
Printing labels will cause dirt such as paper dust, particles of ink and label adhesive to accumulate on the Thermal Printhead. This can cause poor print quality and incomplete printouts. When this happens the Printhead must be cleaned:

1. Turn the Printer Off.
2. Open the Top Cover.
3. Pull the Printhead Lever out and rotate it upward to the right (counterclockwise) to open the Thermal Printhead.
4. Remove the label stock and ribbon from the Printer.
5. Clean the Printhead surface (see yellow arrow) with a special cleaning pen or a cotton swab soaked in Isopropyl Alcohol.
6. Allow the Printhead to dry for 2-3 minutes before turning the Printer back on.



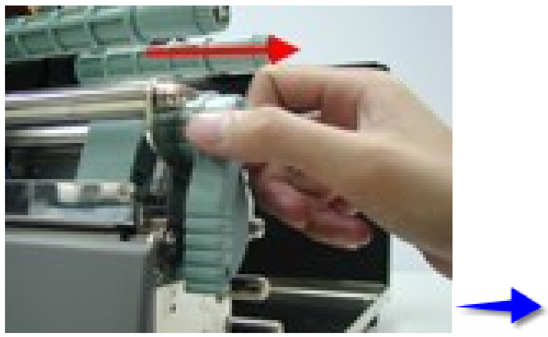
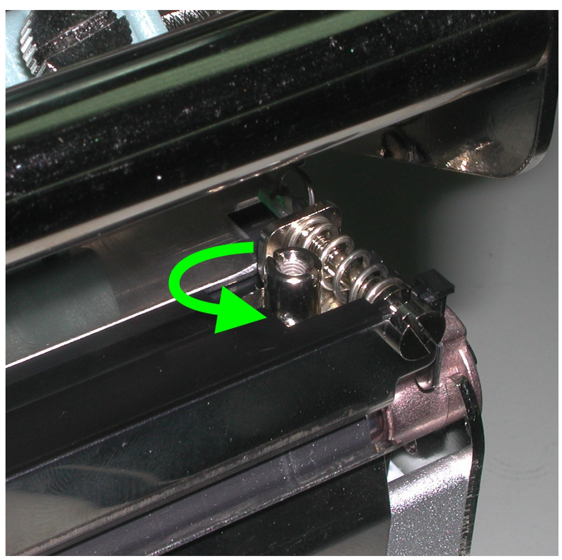
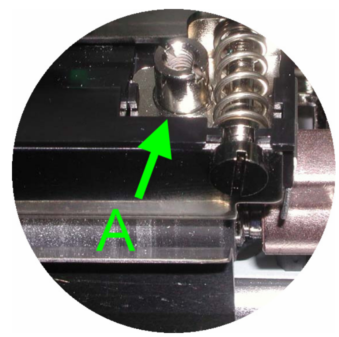
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Printhead Replacement

1. Switch the power off to the printer and unplug the printer.	
2. Pull the Printhead Lever out and rotate it upward to the right to open the Printhead. Remove any media from the printer.	
3. Gently pull the printhead assembly towards you as shown.	
4. To replace the printhead, line up the plug **(Fig.1)** and side guides **(Fig.2)** of the printhead assembly and gently insert the printhead back into its carriage.	 **Fig. 1**  **Fig. 2**

Thermal Printhead Print Line Adjustment

When printing on stiff or thick paper, the Print Line needs to be moved forward (paper feed direction) in order to achieve better print quality.

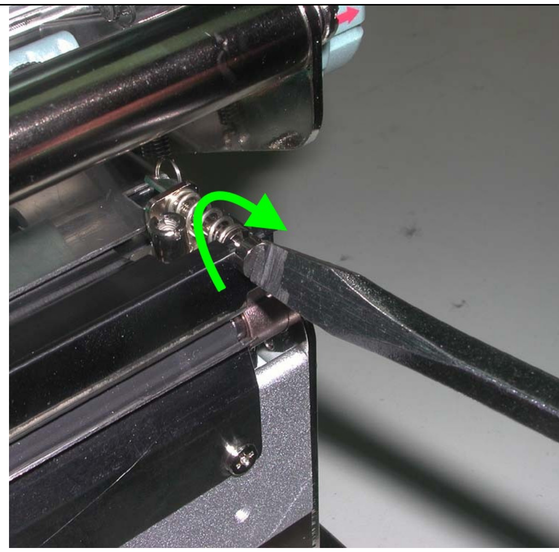
1. Pull the Printhead Lever out and rotate it upward to the right (counterclockwise) to open the Printhead.	 
2. Use a flat tip screwdriver to loosen the screws (marked A) on each side of the Printhead one full turn (as indicated by the arrows)	 

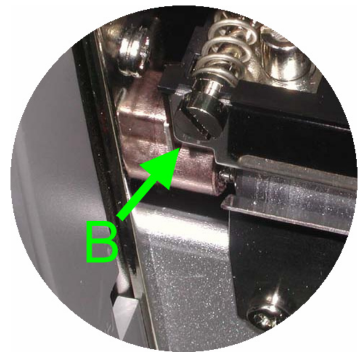


NOTICE!
Do NOT perform the Print Line Adjustment until the screws on each side of the Printhead (marked A) have been loosened one full turn!

3. Move the Print Line all the way back by turning the screws on each side of the Printhead (marked B) counterclockwise

4. Then turn the screws clockwise a quarter turn at a time to move the Print Line forward. Adjust both screws by the same amount to ensure that the Print Line and the Platen Roller are parallel.

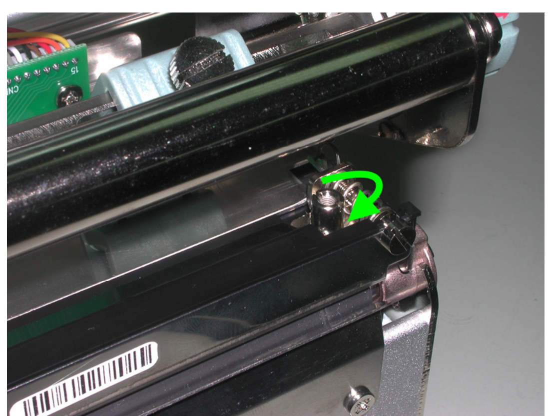




One full turn of the screws (marked B) will move the Thermal Printhead 0.5mm (.02”).

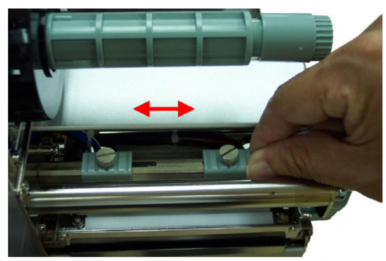
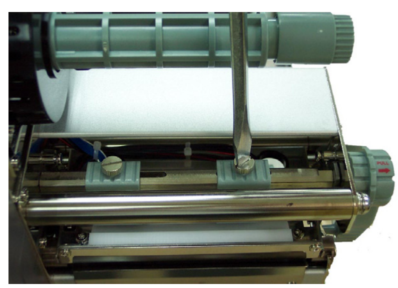
5. Once the Print Line Adjustment is completed, use a flat tip screwdriver to tighten the screws on each side of the Printhead.

6. Print a test label with a black bar across the entire width of the label to check print quality and repeat steps 4 and 5 as necessary to achieve proper print quality.



Thermal Printhead Spring Box Position/Pressure Adjustment

If one side of the printed labels is not being printed clearly, or if ribbon wrinkles occur, then adjust the Thermal Printhead Spring Box position or pressure to cure the problem.

1. Pull the Printhead Lever out and rotate it upward to the right (counterclockwise) to open the Printhead.	
2. Move the Thermal Printhead Spring Box on the right side. Normally, the wider the paper, the farther the Thermal Printhead Spring Box will be from the center wall and for narrower paper, the Thermal Printhead Spring Box will be closer to the center wall.	
3. Use a flat tip screwdriver to adjust the pressure of the Thermal Printhead Spring Box. Turn the screw clockwise to increase the pressure or counterclockwise to decrease the pressure.	

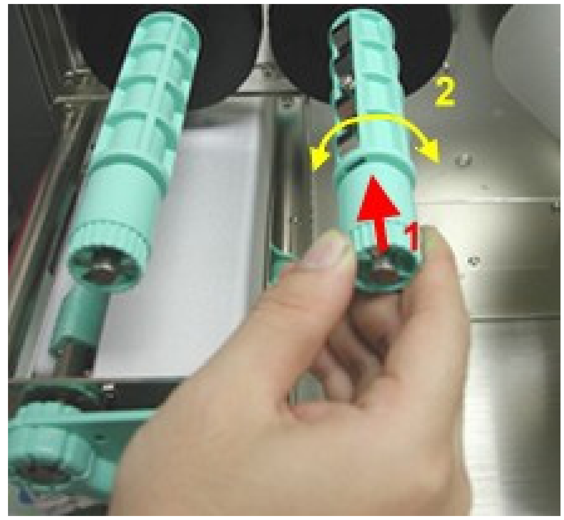
Ribbon Tension Adjustment

Due to differences in ribbon material, ribbon wrinkles may occur during printing. When this happens increase the ribbon tension by:

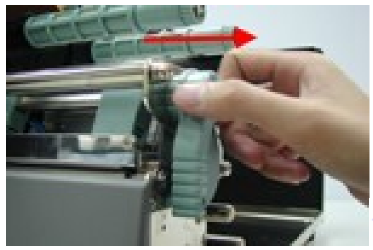
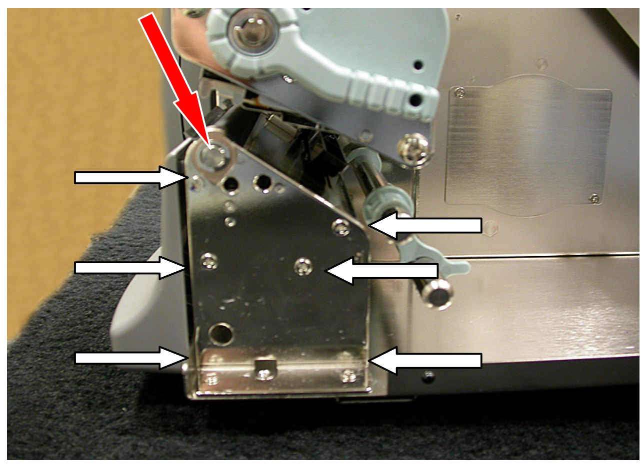
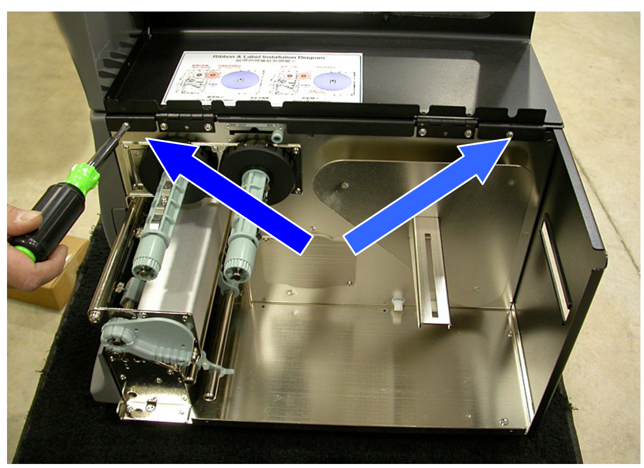
1. Pushing the end of the shaft in.
2. Then turn the ribbon shaft clockwise to increase the tension.

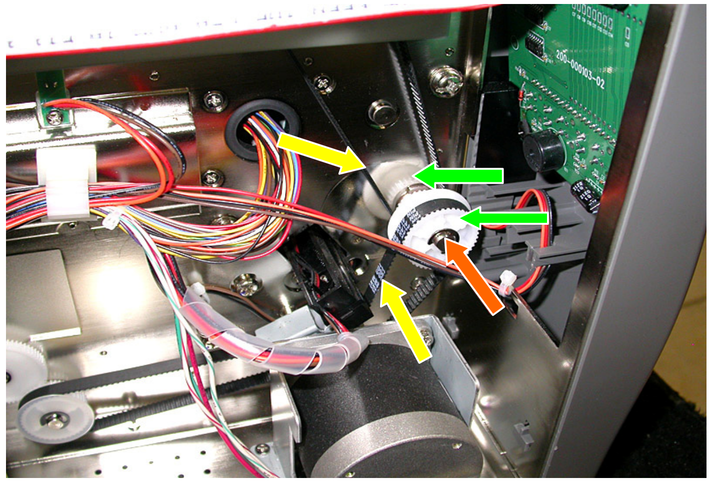
If narrower ribbons are being used (especially ribbon widths of less than 2”), the Printer might have a problem feeding labels. When this happens decrease the ribbon tension by:

1. Pushing the end of the shaft in.
2. Then turn the ribbon shaft counterclockwise to decrease the tension.

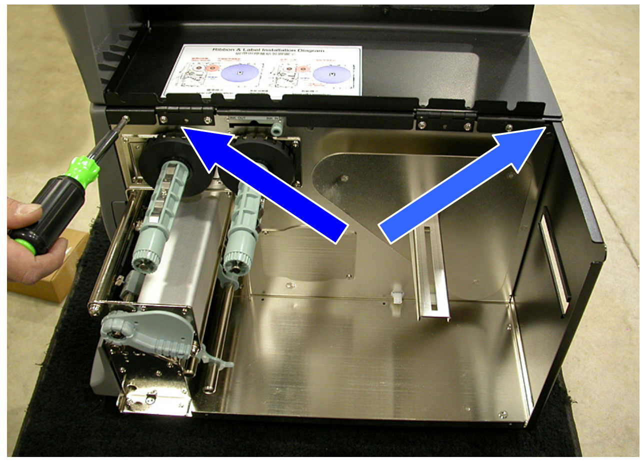
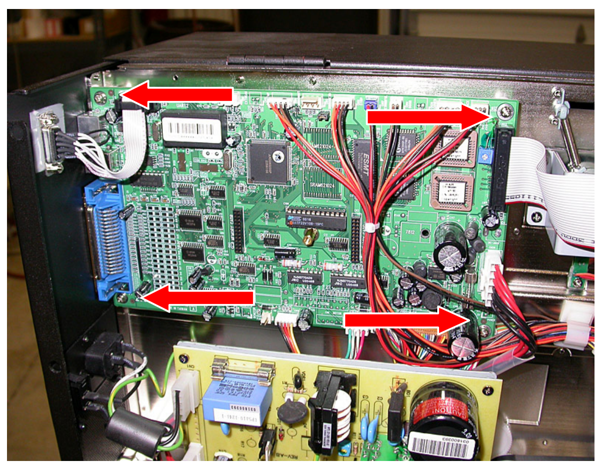


Drive Roller Replacement

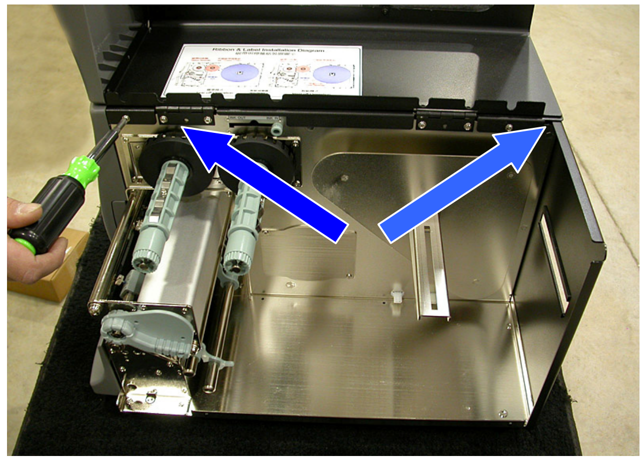
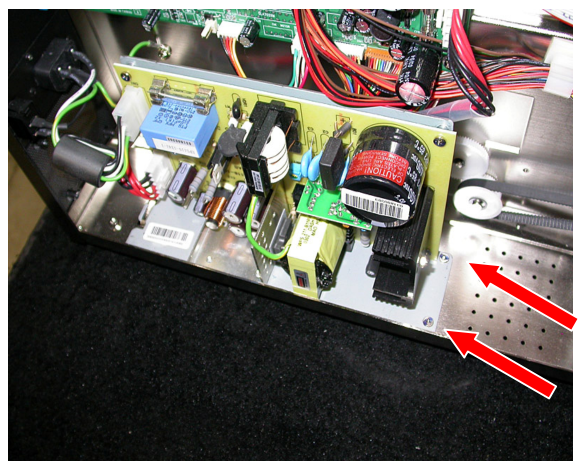
1. Switch the power off to the printer and unplug the printer.	
2. Pull the Printhead Lever out and rotate it upward to the right (counterclockwise) to open the Printhead.	 
3. Remove all six Phillips screws (white arrows) and the c-clip (red arrow) as shown.	
4. Remove the electronics side cover by first removing the two Phillips screws (blue arrows) and then closing the media cover. The electronics side cover can then be removed by sliding the cover straight up.	

5. Remove the c-clip (orange arrow), two gears (green arrows) and two belts (yellow arrows) as shown.	
6. You may now remove the drive roller from the media side of the printer. Reverse these steps to re-install the drive roller.	

Main board Replacement

1. Switch the power off to the printer and unplug the printer.	
2. Remove the electronics side cover by first removing the two Phillips screws (blue arrows) and then closing the media cover. The electronics side cover can then be removed by sliding the cover straight up.	
3. To replace the main board unplug all cables and remove the four Phillips screws (red arrows) as shown. This will allow you to remove the main board. Reverse these steps to install the new main board.	

Power Supply Replacement

1. Switch the power off to the printer and unplug the printer.	
2. Remove the electronics side cover by first removing the two Phillips screws (blue arrows) and then closing the media cover. The electronics side cover can then be removed by sliding the cover straight up.	
3. To replace the power supply unplug all cables and remove the two Phillips screws (red arrows) as shown. The power supply can now be removed. Reverse these steps to install the new power supply.	

APPENDIXES

LCD Error and LED Light Message Descriptions

LCD Message Display	LED Message Light			Beeps	Description	Solution
	Power	Ready	Error			
Printhead is opened	Green		Red	4	The Printhead is not firmly in place.	Re-open the Printhead and make sure it closes tightly.
Entering the Cooling Process	Green		Red		Printhead temperature is too high.	Printer goes back to standby mode after cooling.
Out of ribbon or check ribbon sensor	Green		Red	3	No ribbon is installed and using Direct Thermal stock.	Make sure the Printer is in the Direct Thermal mode.
					The ribbon is used up or the Ribbon Supply Shaft is not moving.	Replace with new ribbon roll.
Out of media or check media gap sensor	Green		Red	2	The moveable sensor is unable to detect paper.	Make sure the movable sensor mark is at the correct position. If the sensor is still unable to detect the paper then go through Auto Sensing steps again.
					The label stock is used up or label sensor can't detect paper.	Replace with new roll of labels. If the moveable sensor is still not able to detect the paper then go through Auto Sensing steps again.
Check paper setting	Green		Red	2	Improper paper feed.	Possible causes: 1. Media falling into the gap behind the platen roller. 2. Can't find label gap/black mark. 3. Black mark paper out.
Command is not recognized	Green		Red	2	Wrong command.	Check Printer commands for possible errors or missing parameters.
Memory is full	Green		Red	2	Memory is full.	Delete unnecessary data in the memory or add the optional memory expansion module.
Filename can not be found	Green		Red	2	Can't find the file.	Use "~X4" command to print out all the files and check whether the file exists and if the name is correct.
Filename is repeated	Green		Red	2	Another file with this name exists.	Change the file name and download again.
No label format in memory	Green	Green		2	Trying to load a format from memory when none are saved.	Press Enter or ESC on the keyboard to clear the error and download a label format to memory before trying to print it.

Problems and Recommended Solutions

Problem	Recommended Solution
LCD shows no message after switching the Printer on	◆ Check the power cord
LED light turns red (power/status) after printing stops	◆ Check for software setting or program command errors ◆ Check if labels or ribbon is out and replace with suitable labels or ribbon ◆ Check if label stock is jammed ◆ Check if Printhead Mechanism is closed (Printhead not positioned correctly) ◆ Check if sensor is blocked by paper/label ◆ If Cutter is installed check that it is working and working properly
Printing started but nothing was printed on the label	◆ Check that the ribbon is installed with the inked side facing the label media ◆ Select the correct Printer driver ◆ Select the correct label stock and print mode
The labels jammed when printing	◆ Clear the label jam and check that the Printhead is clean
Only part of the label was printed	◆ Check if label or ribbon is stuck on the Printhead ◆ Check if application software has errors ◆ Check if start position setting has errors ◆ Check if ribbon has wrinkles ◆ Check if Ribbon Supply Shaft is creating friction with the platen roller. If the platen roller needs to be replaced, please contact your Reseller for more information. ◆ Check if power supply is within the voltage range
Part of the label was not printed completely	◆ Check if Printhead is dirty ◆ Use internal command "~T" to perform a Test Print and check if the Printhead can print across its entire width ◆ Check the media quality
Printout not in desired position	◆ Check if sensor is covered by paper or is dirty ◆ Check if liner is suitable for use, please contact Reseller for more information ◆ Check if label roll edge is aligned with Label Width Guide
Labels are skipped while printing	◆ Check if error occurs on label height setting ◆ Check if the sensor is covered by paper or is dirty
Smudged or blurry printout	◆ Check print darkness setting ◆ Check if Printhead is dirty
The cutter did not cut straight	◆ Check if label stock is installed correctly
The cutter did not cut the label successfully	◆ Check if the label thickness exceeds 0.16mm (.006")
When using the Cutter the labels could not feed or abnormal cutting occurs	◆ Check if Cutter is installed properly ◆ Check if Paper Feed Rods are sticky ◆ Check that label is greater than 35mm (1.38") high so it can clear the Cutter
The Stripper Sensor is not functioning correctly	◆ Check if Stripper Sensor is covered with dust ◆ Check if labels are installed properly